

Project Core, Ellen's Commentary

Introduction:

The scope of Project Core is one of its strengths. The correlations suggested by the survey data can be used to generate hypotheses to further study a variety of paranormal phenomena. In my opinion, another strength of the project is that the collaborators themselves have a variety of interests. As a group, we are not attempting to provide evidence for or against any specific type of experience. We each have our own ideas about what the most interesting findings from the survey are and what directions future research should take. I'll present my ideas here, for anyone who cares to read them. As with some previous work, the writing here will be less formal than it would be for publication in a scientific journal. For those who might make the criticism I have previously received that, and forgive here that my paraphrasing may lack the eloquence of the original, "She can't be a scientist. She used un-science words,": Yeah. I do that. Get over it. If you don't like my writing style, don't waste time and energy complaining. Just stop reading. I can't imagine someone is forcing you to read this à la *Clockwork Orange*.

Why scientists shouldn't dismiss paranormal research:

Look at the picture below (Figure 1). The photo on the right shows the same tree as the one in the painting on the left. One could easily argue artistic interpretation. If I look closely at the photo, I begin to notice colors I didn't at first glance, and can see how these might be exaggerated to obtain the image in the painting. However, my understanding is that the artist, Concetta Antico, actually sees the tree the way she painted it.



Figure 1: "The woman with superhuman vision," by David Robsen, BBC, September 5, 2014 (<http://www.bbc.com/future/story/20140905-the-women-with-super-human-vision>)

Until recently, this probably generated a number of explanations ranging from skepticism that she *really* sees things this way to deciding she was hallucinating and must be a little crazy. Thanks to science, we now know that she is a tetrachromat. Humans can see colors because of special cells in our retina called “cone cells.” Most of us have three types of cone cells that respond preferentially to different light wavelengths: L (long), M (medium), and S (short). The spectra of these overlap and don’t correlate directly with colors, but are generally associated with red, green, and blue, respectively. The genes that encode photopigments for the red and green cones are on the X chromosome. Red-green color blindness and the reason it is more common in males is a standard example of X-linked genetics in high school biology courses. Some of the photopigment genes are highly variable. Since women have two X chromosomes and randomly inactivate one in each cell, they may have two different photopigment alleles, which could result in additional cone types that are sensitive to slightly different light spectra. Depending on how different the recognized spectrum is and the proportion of cells that have the other cone types, the difference in vision could be slight or somewhat significant. Concetta Antico is considered to be remarkable, even for a tetrachromat.

The potential for seeing more wavelengths of light has also sparked my personal quest to be reincarnated as a mantis shrimp (Figure 2). They have 12 different receptor types (12!!!), including some that can detect wavelengths in the UV and IR spectra. For more information, watch “True Facts About the Mantis Shrimp” (<https://www.youtube.com/watch?v=F5FEj9U-CJM>). You’re welcome.



Figure 2: Me in my next life. I hope I’m a smasher.

Similar to tetrachromacy, when someone claims that they can see auras, spirits, or some other form of energy that is invisible to me, I can’t rule out the possibility that they are right. Naturally, I can’t rule out that they’re trying to get my money by claiming to have a message from my dead ancestor, but I can’t dismiss all claims as untrue based on the fact that many dishonest people have claimed to be psychics, mediums, etc. Scientists make the general assumption that the majority of people detect the same information through their senses (vision, hearing, senses of smell, taste, and touch), but this may simply not be the case. I think one area for future research that might be productive is the validation of psychic ability with subsequent collaboration to develop more objective and specific measurement methods. EMF detectors are standard among ghost hunters, but these are acknowledged to be non-specific. My impression is that some of the groups most interested in making ghost hunting and similar investigations as scientific as possible will not work with psychics. I see their perspective, but this may limit the ability to develop detection methods that correlate specifically with activity. I’m not suggesting that we should rely exclusively on the ability of psychics to determine where activity is occurring, but I’m not convinced they should be excluded from research. It’s possible that psychic abilities have a genetic basis, but at this point, it is not clear which genes should be targeted for study and would caution against anyone handing over genetic information without assurances of confidentiality and how the data will be used.

We should acknowledge that some claims can be explained and then focus on the others:

There have been several explanations proposed to explain encounters with entities and other odd experiences. These include sleep disorders and sleep-related phenomena such as sleep paralysis and hypnagogic hallucinations, false memories that may reflect impairments in source monitoring, and fantasy proneness. While each of these alone explains a very limited number of experiences, a combination of these factors could explain a greater proportion of experiences, especially those that occur at times other than when the individual is completely and definitively awake.

It is worth mentioning here some related concepts that tend to be brought up in discussions of hallucinations, false memories, and fantasy proneness:

1. Absorption—initially described by Tellegen, refers to the ability to be deeply involved or engaged, and is often used in the context of being able to be thus involved or engaged in one’s own thinking. Tellegen developed a questionnaire to measure absorption (the Tellegen Absorption Scale [TAS]), and there is a general correlation between absorption and susceptibility to hypnosis.

2. Dissociation—there is a distinction made between trait and state dissociation. Trait dissociation refers to a general tendency to have dissociative experiences and is a relatively stable trait while state dissociation is a temporary dissociate state that is usually discussed in relation to traumatic events. The questionnaires used to measure dissociation include the Dissociative Experiences Scale (DES) and the Clinician Administered Dissociative States Scale (CADSS).

3. Transliminality—defined by Thalbourne as a hypersensitivity to “psychological material,” originating in the unconscious and/or external environment. “Psychological material” is a broad concept that includes ideation, imagery, affect and perception. High transliminality implies paranormal and/or mystical experiences, creativity, manic experiences, magical ideation, high absorption, fantasy proneness, hypersensitivity to sensory stimuli, and positive attitudes toward dream interpretation. Transliminality is usually measured by the Revised Transliminality Scale and correlates with measures of openness to experience, high absorption, and thin boundaries (less separation/more connection between mental functions and processes). An association between transliminality and dissociation has also been reported (Soffer-Dudek and Shahar, 2011).

Sleep disorders

I’m not an expert on sleep disorders or on neurological activity during different sleep stages. Many of the Project Core submissions described events that occurred as the person was falling asleep, waking up, or that the experience woke them up. There were also a significant number of reports of feeling paralyzed or restrained. I was aware of sleep-onset paralysis, and knew that this could explain some of what people were experiencing. What I wasn’t initially aware of was how well established hypnagogic (while falling asleep) and hypnopompic (while waking up) hallucinations are, both visual and auditory. Both sleep-onset paralysis and hypnagogic hallucinations are part of a classic diagnostic tetrad for narcolepsy (the other two symptoms are excessive daytime sleepiness and cataplexy [transient episode of muscle weakness]), but can occur in non-narcoleptic individuals. Hypnopompic hallucinations are more common than hypnagogic hallucinations in the general population (for a brief review of parasomnias, see Wills and Garcia, 2002).

Stage 1 sleep is a very light stage and someone awakened during this stage might claim they hadn't been asleep. I found this particularly interesting since there were several claims of an experience occurring while someone was lying down, with or without their eyes closed, but *not asleep*. To be clear, I am not implying that the people who submitted these experiences are being dishonest, but that there may be an underappreciated stage of sleep that most, if not all, of us cannot differentiate from being awake. As we fall asleep, there is a change in mental activity from thoughts to dreams or hallucinations. REM sleep tends to be more hallucinatory or dream-like than non-REM sleep, but the processes are not tightly correlated, so the mental activity typical of REM sleep can occur as someone is falling asleep or waking up. The visual and and/or auditory hallucinations may easily be mistaken for real events that are occurring in real time.

Furuya and colleagues considered 183 ghost stories from two sources, "Tohno Monogatari" (Tohno Folktales) and "Nihon Kaidan Shu" (Ghost Tales of Japan), and were able to categorize approximately two-thirds of them into four categories based on types of hallucinations, both sleep-related and non-sleep-related. Table 1 below summarizes these types and their defining characteristics (Furuya, et al., 2009).

Sleep paralysis occurs when the typical loss of muscle tone that normally occurs during REM sleep occurs while someone is falling asleep or waking up. Sleep paralysis may occur with or without hallucinations. Individual differences in psychology and beliefs significantly influence how the paralysis and hallucinations, if present, are interpreted. The experience of sleep paralysis closely matches descriptions from folklore of nighttime visits from mares, hags, witches, succubi/incubi, demons, ghosts, etc. (the Wikipedia entry for sleep paralysis is actually not a bad place to start for anyone interested in this). Some studies have supported a connection between traumatic events (including claims of alien abductions) and incidence of sleep paralysis, and individuals who reported both alien abduction and sleep paralysis have higher scores on measures of absorption and dissociation (McNally and Clancy, 2005). In addition, the most common type of hallucination reported with sleep paralysis is the "sensed presence," and may have an underlying component related to depression and/or social anxiety (Simard and Nielsen, 2005). Daily stress can lead to increases in sleep-related experiences in individuals with high trait dissociation. The predictability of sleep-related disorders, including sleep paralysis, bad dreams, and hypnagogic/hypnopompic hallucinations, in response to daily stress was only observed in dissociative individuals (Soffer-Dudek and Shahar, 2011).

Hallucinations, false memories, and source monitoring errors

Some people are more predisposed to hallucinations than others (this can be measured using the modified Launay-Slade Hallucinations Scale [LSHS]), but having hypnagogic/hypnopompic hallucinations is not indicative of a psychiatric disorder. Hallucinations may be explained by impairment of something called "reality monitoring," a type of source monitoring (ability to correctly attribute the source of memories). Specifically, people with a predisposition to hallucinations may incorrectly attribute their thoughts to an external source. My understanding is that this could result in something being perceived rather than imagined. Factors that may contribute to reality monitoring include emotional salience (characterized by strong positive or negative emotions), cognitive effort (how much thinking was needed), and meta-cognitive beliefs (the beliefs one has regarding his or her own thought processes). One method for studying this is to use a source monitoring task. The task I'll describe is from a 2004 paper by Larøi, Van der Linden, and Marczewski that I think clarifies

Table 1: Classification of ghost tales by hallucination type (modified from Furuya, et al., 2009)

Type of ghost tale	Essential diagnostic feature	Core features
Hypnagogic hallucination-like	Appears while the individual is sleeping or when they are awakened from sleep	<ul style="list-style-type: none"> ✓ Image of the ghost can be clear or vague, but usually not very vivid ✓ Generally ill feeling, sometimes associated with presence of an incubus or succubus; feeling of being touched or feeling someone's breath ✓ The ghost sometimes speaks, makes noises, has a conversation with the individual, or shakes the bed
Highway hypnosis-like	Highway hypnosis is the tendency to become drowsy and fall asleep, sometimes into the REM stage, while driving, but it can occur while someone is concentrating on a simple mechanical task. The hallucination appears while the individual does not recognize the change in level of consciousness	<ul style="list-style-type: none"> ✓ The sleep- or trance-like state can occur with the individual sitting in an upright position and staring ahead ✓ Image of the ghost is usually clear, but sometimes vague ✓ The ghost sometimes speaks or has a conversation with the individual
REM sleep behavior disorder/somnambulism-like	The loss of motor inhibition leads to a spectrum of behaviors while asleep; in somnambulism, the individual may perform normal actions as if awake	<ul style="list-style-type: none"> ✓ The individual often has a dream at the same time, which convinces him/her that the experience was real ✓ The individual notices an abnormality in the room and thinks someone or something has been there (door or window open that wasn't, etc.) ✓ Image of ghost not as clear as in highway hypnosis-like experiences
Vivid hallucination-like	Similar to hallucinations experienced by individuals with some types of dementia (diffuse Lewy body disease, Parkinson's) and Charles-Bonnet syndrome (complex visual hallucinations that occur in someone with partial or complete blindness); hallucinations not correlated with sleep	<ul style="list-style-type: none"> ✓ Image of the ghost is clear or vivid ✓ Hallucinations are purely visual (the ghost does not speak to or touch the individual) ✓ Ghost vanishes when individual attempts to touch it or throw something at it

these points. If you aren't interested in this part, just skip the next two paragraphs.

One hundred study participants were each given 30 words, 10 each that were considered positive, negative, and neutral. For each word, the participant was asked to say the first word that came to mind, with the exception of proper names. For each emotion category (positive, negative, and neutral), five words had short latency (took very little time to think of a word) and five words had long latency (took longer to think of a word). The short and long latency were included to reflect less and more cognitive effort required in response to the word given. After a 20-minute delay, the participants were shown words on a computer screen. These words included words given by the experimenter, words given in response by the participant, and distractors, given in a random order. The participant first had to determine whether a given word was "old" or "new." If "old," they were asked whether the word had been given by the experimenter or by the participant. The participants also completed the LSHS and the Meta-Cognitions Questionnaire (MCQ). The 25 participants with the highest scores on the LSHS were considered the "hallucination prone" (HP) group, while the 25 participants with the lowest LSHS scores were considered the "non-hallucination prone" (NHP) group.

Although there was no significant difference in distinguishing between "old" and "new" words, the HP group was significantly more likely to misattribute a self-generated word as one provided by the experimenter. This difference was observed for words considered positive or negative, but not for neutral words, and there were more errors for negative vs. positive words. Basically, participants in the HP group were more likely to misattribute words they generated in response to emotionally charged words (especially negative ones) to the experimenter. The HP group also had more errors with words categorized as having long latency. For most people, having to think more to generate a word in response to one the experimenter gave would act as a mental cue—"I know I came up with that word because I had to think about it more than some of the others." It seems that in general, the HP group did not use this increased cognitive effort as a cue, and were more likely to think the word had been provided by the experimenter. Participants in the HP group were also more likely to have higher scores on the MCQ in general, but the number of errors in accurately identifying the source of a word was correlated with factors 2 and 3 of the questionnaire: uncontrollability and danger (intrusive worrying thoughts, difficulty controlling these thoughts, danger of not controlling these thoughts), and cognitive confidence (concern that his/her memory is unreliable, difficulty in focus and concentration). This study investigated all three factors mentioned above, and the findings were consistent with other studies that focused on only one of these. From this type of research, it is easy to see how images generated internally as part of dream-like activity occurring while falling asleep could be perceived as coming instead from an external source.

A similar study (Clancy, et al., 2002) was conducted comparing individuals with "recovered" memories of alien abduction, individuals who felt they had been abducted but had no memories of the experience (called "repressed" memories in the study), and control individuals who denied a history of alien abduction. The study used a variant of the Deese/Roediger-McDermott paradigm, in which participants are given a list of words that relate to a "critical lure" word that is not given. After seeing or hearing the list, the participants "recall" the list by writing down the words they remember. After a series of these, they are given a list of words to categorize as old or new (recognition test). The word lists in this study varied in length (3, 6, 9, 12, and 15 word lists). Writing down the critical lure during recall is "false recall," while identifying a critical lure on the old-new recognition test is "false recognition." The study showed that the "recovered" and "repressed" groups had higher rates of false recall

and false recognition than controls, and the “recovered” memory group had higher rates of false recognition than the “repressed” memory group. These individuals may be more error-prone in source/reality monitoring (as discussed for hallucinations). Many individuals in the “recovered” memory group had undergone hypnosis to “recover” these memories. It is now generally accepted that memories “recovered” during hypnosis are not reliable, although I believe this has been studied most often for claims of abuse (including Satanic ritual abuse, because the 80s were a strange time). The combination of source/reality monitoring errors and hypnosis suggests that the “recovered” memories are likely false memories. This study also points out that the memory distortion exhibited by the “recovered” memory group was more limited and specific than that observed in trauma victims.

Fantasy proneness

I’m going to begin by clarifying this term and briefly reviewing where it came from and how it relates to other psychological concepts. I am not a psychologist, so there may be subtleties I am not aware of. The current description of the “fantasy prone person” comes out of research in the early 1980s by Wilson and Barber that actually builds on the concept of “imaginative involvement” described by Hilgard in the 1960s and 1970s. These studies initially focused on characteristics of individuals considered to be highly hypnotizable. While Hilgard’s research focused on “imaginative involvement” as an important characteristic underlying hypnotic responsiveness, Wilson and Barber reported a set of characteristics and experiences related to longstanding involvement and imagination in a group of highly hypnotizable women they referred to as “fantasy addicts,” “fantasy-prone personalities,” and “fantasizers.” I will stick to “fantasy-prone person/personality” and “fantasy proneness.” “Fantasy addict” seems pejorative and conjures an image of someone stalking George R. R. Martin until he *finally* finishes “Song of Ice and Fire” (not that I know anyone like that), and “fantasizer” sounds like the newest exercise fad in which you imagine yourself to a thinner you, which trust me, doesn’t work. The characteristics of a fantasy-prone person that Wilson and Barber described include the following (I’ve paraphrased based on how they are presented in several papers):

1. spending a significant amount of free time while awake fantasizing
2. ability to hallucinate objects
3. ability to experience fantasies as real, including achievement of orgasm without physical stimulation, physical manifestations (such as nausea and anxiety) of observed violence on TV, and vivid recall of personal experiences (including childhood experiences)
4. hypnagogic hallucinations
5. claims of psychic and out-of-body experiences
6. claims of having healing powers
7. occasional difficulty in differentiating between fantasy and reality
8. a sense of social awareness and sensitivity to cultural norms, resulting in a secret fantasy life
9. fantasizing as a child
10. having imaginary friends as a child

The combined work of Hilgard, Wilson and Barber arrived at two childhood pathways that might result in being highly susceptible to hypnosis and fantasy prone as an adult:

1. encouragement to fantasize from a significant adult

2. fantasizing as a way to cope with or escape loneliness, isolation, or an aversive environment

Fantasy proneness is usually measured by the Inventory of Childhood Memories and Imaginings Scale (ICMI) developed by Wilson and Barber in 1981. They estimated that approximately 4% of the population would fit criteria for being fantasy prone, and the majority of these people are well adapted. That is, fantasy proneness is not, in and of itself, psychopathological. There were, however, several problems with the studies. Most notably, the small sample size (27 highly hypnotizable and 25 control study participants) and that the cohort included only women, most with post-graduate degrees. This led to a series of studies in college students by Lynn and Rhue in the mid- to late-1980s (summarized in Lynn and Rhue, 1988). They were able to validate the construct of the fantasy-prone personality, but found that fantasy proneness and hypnotizability are not strongly correlated. Fantasy-prone individuals were more likely to have been encouraged by parents to read stories and more likely to report severe punishment or physical abuse, somewhat supporting the two pathways hypothesized to lead to fantasy proneness. When tested using the Minnesota Multiphasic Personality Inventory (MMPI), fantasy-proneness was associated with high scores on the Frequency (F) scale (indicating a willingness to endorse items otherwise endorsed infrequently) and an 8/9 code type (indicating elevated scores on the Schizophrenia and Hypomania scales). **This does not indicate that fantasy-prone people are schizophrenic or hypomanic!!** The elevation of these scales is more likely reflective of unconventional/peculiar thinking and perhaps a preoccupation with an internal fantasy world. This is consistent with the way many fantasy-prone individuals see themselves—as unique and create individuals who don't necessarily conform to mainstream society. There was no evidence to support a correlation between fantasy proneness and depression, anxiety, or hysteria. Rorschach testing (yes, those ink blot things) also seemed to support that most fantasy-prone individuals maintain a balance between their inner fantasy life and that pesky thing called reality. Lynn and Rhue found no evidence that fantasy-prone individuals are generally less well adjusted or have fewer friends than those who are not fantasy prone, and estimated that only 20-35% of the fantasy-prone population may have significant signs of maladjustment, psychopathology, or deviant ideation with an even a smaller percentage fulfilling criteria for schizotypal or borderline personality disorders.

As pointed out in the synopsis of survey results, fantasy proneness is often offered as an explanation for reports of alien abduction/contact. The hypothesis that abductees/contactees are more fantasy prone than others has not been consistently supported (Bartholomew, Basterfield, and Howard, 1991; Spanos, et al., 1993). Compared to individuals who only saw lights or shapes in the sky they interpreted as UFOs, individuals who had more intense experiences (visual/verbal/telepathic contact, abduction, missing time) tended to more often report their experiences as being sleep-related and/or negative (Spanos, et al., 1993). The same study concluded the people who report having UFO experiences were more likely to believe in UFOs/aliens, but which of these preceded the other is not possible to determine.

A study by Sjöden and colleagues investigated fantasy proneness in relation to distinguishing “false reports” from “false memories.” This Swedish study asked two groups of students (artistic vs. non-artistic) if they had seen footage of the murder of the Swedish foreign minister that occurred in a shopping mall. No actual footage of the attack itself exists, so the 64% of the study cohort who claimed to have seen the footage were giving a false report. When asked additional questions, only 19% could provide explicit details based on the footage they

“saw,” and these were considered “false memories.” There were group differences in fantasy proneness (the artistic group was more fantasy prone than the non-artistic group, and women were more fantasy prone than men), but correlations between fantasy proneness and false report/false memory were not supported (Sjödén, et al., 2009). To me, this suggests that although both fantasy proneness and source/reality monitoring error have some connection with hallucinations, fantasy prone individuals do not necessarily have any impairment in source/reality monitoring and are therefore not more likely to have false memories of events. This is somewhat supported by another study that showed a significant correlation between false recognition, absorption, and the tendency to hallucinate, but no significant correlation between false recognition and fantasy proneness. In fact, this study didn’t definitively support differences in fantasy proneness between experiencers and controls (French, et al., 2008).

Back to my point

My goal here is not to be dismissive of paranormal claims, but to point out that our definition of “normal” may not be broad enough. If I wake up in the middle of the night, unable to move with Johnny Depp telling me that it’s time we go back to our home planet, that is actually within the range of what my brain is capable of. That’s pretty cool when you stop to think about it. Each factor by itself (sleep paralysis, hypnagogic/hypnopompic hallucinations, source/reality monitoring errors that make hallucinations and/or false memories more likely, and fantasy proneness) probably accounts for a subset of events that are limited in scope, duration, and intensity. But what if you combine a tendency for all of these things in the same individual? There’s no reason to think it doesn’t happen, and this could lead to some extremely intense experiences that originate in the individual’s imagination, but are extremely difficult to differentiate from “real” in the physical, measurable/documentable sense of the word.

I personally find a combination of the above factors persuasive in explaining most experiences that occur while someone is falling asleep, asleep, awakened during sleep, waking up in the morning, and lying down (with or without eyes closed). Because we have these explanations, in general I think it will be more productive to study experiences that occur while the people involved are awake. However, I have a few exceptions.

Exceptions to the rule

First, I am completely supportive of attempting to document experiences with video, assuming the entities encountered during these events can be captured on video. I wouldn’t conclude that nothing was there based on a video that didn’t capture anything, but a video that did capture something convincing would be valuable (by convincing, I mean something easily visible to a typical observer). It’s also possible that typical data taken during a sleep study can differentiate between a hallucination and seeing something externally generated when the person is falling asleep or wakes up in the middle of the night. I’d be interested in hearing a sleep specialist/neurologist’s perspective on this since it is outside my area of expertise.

Second, there were also many claims of out-of-body experiences that occurred when someone was falling asleep or sleeping. Some of these include descriptions of being able to travel anywhere and observing people in other places. If people who regularly have these experiences and better yet, can control their occurrence, can be identified, I think this is an area that could be investigated without a great deal of technical or scientific expertise. If the person having the out-of-body experience can accurately describe events, conversations, etc., at an agreed upon remote location, it would provide evidence for the individual legitimately having

out-of-body experiences. If, however, the person claims to have seen me eating a Big Mac in my underwear while watching “Celebrity Ghost Stories” when I was really eating a bucket of KFC in my pajamas while watching “Dance Moms,” I’ll know they were just having a really disturbing dream.

Third, if someone’s area of interest is dreams, they obviously need to consider experiences that occur while an individual is asleep. In this case, these researchers may consider expanding the scope of their work to include hypnagogic/hypnopompic hallucinations. I will also admit that there is currently no way I know of to scientifically investigate questions relating to where the images in dreams are coming from, whether they could be put there by an external source, etc. I think the consensus is that these images come from our subconscious, although there are many theories about exactly what is going on and a whole field devoted to the study of dreams (oneirology), and I have to admit to not having read papers in this field. If hypnagogic/hypnopompic hallucinations are included in the study of dreams, I think determining the general source of these images, for example, if there is actually another entity in the room vs. the person only imagining it, is a necessary step.

A ufologist, a demonologist, and a psychic walk into a bar....

Although the specific reasons may not be entirely the same, I believe my Project Core colleagues and I are in agreement that paranormal researchers with varying interests and expertise should work together and share ideas. I disagree somewhat that having one kind of paranormal experience makes an individual more likely to have other kinds of paranormal experiences, and to reiterate an earlier point, I view differences of this type to be a strength that prevents us from too narrowly pursuing evidence to support one hypothesis over another. I think some types of experience may be more closely related than others, but for the most part, I don’t think our survey data support a correlation between alien abduction and experiencing haunted location activity, for example. I think in general, people experience a limited number of activity types, and that if there are aliens, ghosts, angels, demons, faeries, etc., they are separate things rather than manifestations of one intelligence or entity. I have no evidence, however, that this is the case. We don’t currently have methods that can verify the existence of any paranormal entity, let alone where the entity comes from. It’s also possible that people generally experiencing only some types of paranormal events is an argument *for* a single source that manifests in different ways depending on the individual’s beliefs. There is simply no way to tell at this point, but I don’t think the power of belief should be underestimated (not that we can accurately estimate it in the first place). My rationale for not underestimating belief is somewhat supported by two general findings. From psychology, it seems that our subconscious mind is not as picky as our conscious one when it comes to determining if something is true or not. It will believe pretty much anything, especially if it is told something repeatedly. This is why hypnosis might be especially problematic and also why Stuart Smalley’s Daily Affirmations could actually work (you’re good enough, you’re smart enough, and doggone it, people like you!). From anthropology, it turns out that in societies that hold magical beliefs, magic works the ways it’s supposed to. Don’t ask me how, but it does. That said, I am skeptical of the ability to induce mass hallucinations. It seems simpler to conclude that if a number of people all saw the same thing, something was there to be seen. Of course, eyewitness testimony is notoriously unreliable, so if several people can agree on the details of *anything* they saw, I’m not sure what that’s really an argument for. Moving on...

The lack of verified detection and measurement methods is obviously a barrier that we need to overcome. I think this will involve quite a bit of data collection, both of large numbers of sites/events and over long periods of time at consistently active sites. Another reason for researchers to work together is that techniques used by one type of researcher may prove useful in unexpected ways. Validation of psychic activities and correlation with more objective measurements should also be part of this process. Since the psychological status of the experiencer is often scrutinized by skeptics, participation of psychologists trained to assess personality characteristics such as absorption, dissociation, memory distortions, susceptibility to hallucinations, fantasy proneness, etc., as well as sleep specialists/neurologists that can diagnose potentially confounding sleep disorders would be helpful in identifying cases for which these explanations are unlikely and therefore, less vulnerable to being dismissed by skeptics. Cases in which the individual was taking any medications or recreational drugs that can produce hallucinations have to be ruled out for the time being (or at least studied separately). To be clear, my goal here is not to be dismissive of experiences, but to identify cases that are as clearly paranormal as possible. Skeptics don't usually require evidence of fantasy proneness or other psychology-related characteristics to dismiss any given report, so if we provide evidence against it, they at least have to come up with something else.

The amount of work to be done is somewhat overwhelming, and even with significant amounts of time, money, equipment, resources, etc., progress in science is incremental and is perceived by non-scientists as agonizingly slow. We have to start somewhere. As for me, I have in progress a poorly-designed, low stakes but potentially high pay-off experiment in which I am trying to attract a Brownie. Why? Because June Cleaver I'm not, and this place is a mess.

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